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A SUGGESTED NICARAGUAN POTTERY SEQUENCE BASED ON THE MUSEUM COLLECTION

BY

LYDIA L. WYCKOFF

NEW YORK
MUSEUM OF THE AMERICAN INDIAN
HEYE FOUNDATION
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TABLE OF CONTENTS

	\mathbf{P}^{A}	GE
Introduction		v
Acknowledgments	• •	vii
Preface		ix
Physical and Cultural Setting		I
Pottery Descriptions		5
I. Luna Ware		5
II. Vallejo Polychrome		6
III. Under-slip Incised Ware		8
IV. Black-and-Red Band Polychrome		10
V. Papagayo Polychrome		12
VI. Sacasa Striated		13
VII. Red Ware		15
VIII. Brown Ware		18
IX. Coco Ware		
		19
X. Toya Zone Incised		20
XI. San Francisco Black-on-Red	• •	21
San Francisco Site Report		28
Conclusions		34
References		39
Figures		43
Plates		57



INTRODUCTION

Nicaragua, one of the least-known archeological regions in Middle America, for a variety of reasons has not been as available to field research as neighboring Costa Rica. Although the two areas seem to have enjoyed a close cultural contact in prehistoric times, much yet remains to be done in developing an understanding of that relationship. The pioneer work in 1926 of Dr. Samuel K. Lothrop, at one time a staff member of this institution, remains the most comprehensive study yet published, and the more recent papers by Drs. Albert Norweb and Claude Baudez constitute the remaining major contributions to the subject.

Accordingly, we were pleased when Mrs. Wyckoff approached us, requesting the use of our study collections in order to complete her field manuscript. When it became evident that there would be sufficient material to warrant publication, we decided to make it a part of the Museum publication series in the hope that it might provide helpful data for a better understanding of the early history of Nicaragua.

We are grateful to several individuals whose assistance has made this monograph possible. Initially, Mrs. Wyckoff's careful study makes available a good summary of our Nicaraguan collection. More particularly, we acknowledge the interest of an old friend, Dr. August Freundlich, who was enthusiastic in furnishing the necessary faculty supervision of the

field work, together with the generosity of the University of Miami in yielding the recovered materials; the cordial coöperation of Mrs. Edward L. Lloyd has made it possible for us to add these specimens to the permanent collections of the Museum.

Frederick J. Dockstader Director

ACKNOWLEDGMENTS

I am indebted to so many people for their help with this project that it is impossible to mention every one. Please understand and accept my thanks.

First of all I should like to thank the donor, Mrs. Edward L. Lloyd, whose support made this expedition a reality.

At the University of Miami I am most indebted to Dr. August Freundlich, Chairman of the Art Department and Director of the Emily and Joseph Lowe Art Gallery, and Dr. Eugene Man, Dean of Research.

In Nicaragua the work could not have been done without the kindness and assistance of the following: Ondina and Orlando Fidalgo, Julio Pataky, Hno. Hildeberto María, F. S. C., Haydee Arcía de Marín and family.

I am also deeply indebted to the Heye Foundation staff, Mr. William Stiles and Ruth and Vincent Wilcox. The photography was done by Carmelo Guadagno of the Museum. To the Director of the Museum, Dr. Frederick J. Dockstader, I owe special thanks. Dr. Dockstader's assistance, interest and support was invaluable and deeply appreciated.

The maps included were done by Mr. Douglas Waugh, cartographer of the American Geographical Society; I am most grateful to him. All drawings are my own.

Dr. Michael Coe of Yale University kindly took time from his busy schedule to talk with me and to examine some finds. Lastly I would like to thank my husband, Dr. David Wyckoff, and daughter, Barbara. Without their help and support none of this would have been possible.

August 1, 1970

Lydia L. Wyckoff, New Haven, Conn.

PREFACE

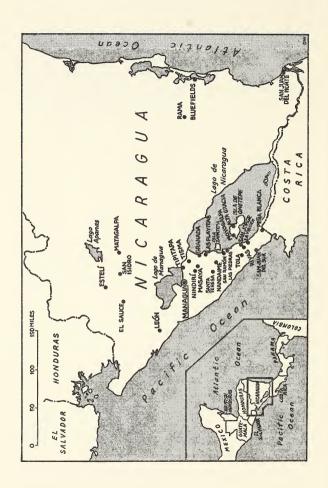
In November of 1966 I conducted an excavation in the Pacific area of Nicaragua. This excavation was conducted under the auspices of the University of Miami where I was a faculty member. Because of the lack of scientifically recorded material from this area, we felt it of primary importance that this report be published. Dr. August Freundlich of the University suggested that I contact Dr. Frederick J. Dockstader, Director of the Museum of the American Indian, Heye Foundation, New York City.

Dr. Dockstader showed an interest in both the report and finds and expressed a desire to have them form part of the Museum collection. These artifacts were then presented to the Museum of the American Indian by both the donor, Mrs. Edward L. Lloyd, on behalf of her husband, the late Dr. Lloyd, and the University of Miami.

Upon a close examination of the numerous fragments from the 1966 University of Miami excavation, it became apparent that apart from a large globular vessel and its capping bowl which, when excavated, were virtually intact, there were no complete or restorable vessels. It therefore seemed logical, in order to present a clear and more complete picture of Nicaraguan pottery, to include in this paper part of the existing Heye Foundation collection. All the various pottery types discussed in this paper were, however, found at the San Francisco site in 1966.

The study that follows is a report of only a portion of the Heye Foundation collection, but, in order to give the reader a more complete knowledge of the area, an Addenda has been added. With this Addenda all Nicaraguan pottery types at the Museum of the American Indian are, therefore, included.





PHYSICAL AND CULTURAL SETTING

The physical geography of Nicaragua consists of a mountainous "back bone" often, especially in the Northern region, enclosing table-lands. On either side of the central plateau are coastal plains, the Pacific plain being the narrower and drier. The Atlantic side is a humid watershed. To the south, Costa Rica and Panama have basically the same topography. Not only because of this natural geographical division which obviously affects the distribution of peoples, but also because of the lack of scientific knowledge of Nicaragua, the country cannot be considered archeologically as its modern political unit.

The Atlantic region at the time of the conquest was occupied by the Moskito tribes who extended up into the southern Atlantic region of Honduras. In Nicaragua, however, virtually nothing is known of the archeology of this area.

The Central Region is unknown not only archeologically, but also superficially, as many areas are unexplored. Even in Costa Rica, Hartman's work of 60 years ago is still the only careful scientific excavation of this region.¹

The Pacific coast, however, has in recent years attracted increasing interest and in 1961 Norweb² conducted excavations in the Isthmus of Rivas. Apart from Norweb's work and the appended report, no

¹ Hartman, 1907. ² Norweb, 1962.

recorded excavations have taken place in this area, but recent studies have been made by Michael Coe and Claude F. Baudez. Not including ethnological artifacts, the entire Heye Foundation collection of pottery comes from this area.

At the time of the Conquest, the Pacific area of Nicaragua and the Nicoya peninsula in Costa Rica were inhabited by the Chorotegans and Nicarao. The Chorotegan languages, belonging to the larger Oto-Manguean group, were spoken in the area of the Bay of Fonseca; the Department of León, Managua, Granada, Masaya and the Nicoya peninsula. The Rivas peninsula and the islands of Lake Nicaragua, however, were occupied by the Náhua-speaking Nicarao. There are also scattered enclaves of Náhua speakers on the Atlantic coast of Costa Rica and as far south as Panama ¹

Both the Nicarao and the Chorotegans stressed, however, that they were recent inhabitants to the area, having arrived from their homeland of Mexico approximately 200 years prior to the conquest. This northern influence is certainly present and can be seen in their customs, elaborate markets, maize farming, armor and weapons.

In examining the Heye Foundation collection the problem then becomes two-fold. For there is not only the question of the relationship between the Nicarao and Chorotegans, but also: when did these tribes arrive and from what region? Assuming that the above-

¹ Lothrop, 1926 (Vol. 1).

mentioned peoples were late comers to the area, whom did they displace?

Norweb.1 from his excavations on the Isthmus of Rivas and Ometepe Island, did manage to establish a time sequence. This may well change as more excavations take place, but because of the importance of this work I will briefly summarize his findings here.

In the Isthmus of Rivas, four periods were established: the Zoned Bichrome, Early Polychrome, Middle Polychrome and Late Polychrome. On Ometepe Island. however, sterile soil was reached at 3.0 meters and the Zoned Bichrome Period was lacking. Norweb feels that, contrary to Coe, the Zoned Bichrome and the Early Polychrome Periods were Nuclear American in character and it was only during the Middle Polychrome Period that the culture becomes truly Mesoamerican in nature.

The dates established by Norweb are as follows:

	Conquest
LATE POLYCHROME	1200 A.D.
MIDDLE POLYCHROME	800 A.D.
EARLY POLYCHROME	400 A.D.
ZONED BICHROME	O A.D.

These dates were not only established through comparative studies but also by some absolute dating.

commence standards say	area of course accounts accounts.
Zoned Bichrome	90 A.D. (Y-810,
(Northwestern	1870 B.P. ± 200)
Costa Rica) ²	430 A.D. (Y-809,
	1530 B.P. + 280)

¹ Norweb, 1964. ² Coe and Baudez, 1961.

4 PHYSICAL AND CULTURAL SETTING

Early Polychrome 572 A.D. (Y-1124. (Granada, 1390 B.P. ± 110) Nicaragua)1 582 A.D. (Y-1122,

1380 B.P. ± 70)

Early Polychrome 792 A.D. (Y-1125. (Ometepe, Nicaragua)² 1170 B.P. + 120)

Pottery from all four periods is now found represented in the Museum of the American Indian collection. Prior to the 1966 excavations at the San Francisco site and the subsequent donation to the Museum, the Zoned Bichrome Period was not represented. The Early Polychrome Period, however, is lacking from the San Francisco site. The Museum pottery from this period is, therefore, not included in the following Pottery Description.

Norweb, 1964.

² Ibid.

POTTERY DESCRIPTION

I. LUNA WARE

A. Simple plain curved bowls

Paste: Reddish to brown in color, being well and evenly fired.

Surface: Slipped with white to yellow buff on interior and exterior surfaces. Some vessels still maintain a high polish.

Shape: Plain curved bowls.

Decoration: Interior — usually plain white slip; in some cases, simple red bands (2 examples). Exterior — fine-line designs in red, two shades of brown, and sometimes black alternating with large yellow-buff ground area. Decoration usually applied on 50 to 75% of yessel with base undecorated.

Frequency: MAI: 6.

Measurements: (average) diameter at rim: 11.6 cm., height: 22.4 cm., thickness: 0.4 cm.

B. Shallow bowl with outflaring rim

Paste: Same, except thicker than type A.

Surface: Same.

Shape: Shallow bowl without flaring rim and slightly rounded base.

Decoration: Interior — fine-line decoration as described for type A. Exterior — yellow-buff slip.

Frequency: MAI: 2.

Measurements: (average) diameter at rim: 18.0 cm., height: 5.6 cm., thickness: 0.5 cm.

C. Tripod

Paste: Same. Surface: Same.

Shape: ?

Decoration: Same.

Frequency: San Francisco Site: sherd I (hollow leg).

Measurements: length: 6.2 cm., circ. at max. point:

14.5 cm.

Observations: Luna Ware¹ is a distinctive Nicaraguan polychrome ware particularly associated with the islands of Lake Nicaragua. Although it utilizes some Middle Polychrome forms, the decorative technique has no known prototype in Central or Mesoamerica. This ware is known to be at least partially historic² and is therefore classified as the terminal point of Late Polychrome. The sole example found at the San Francisco site was on the surface.

II. VALLEJO POLYCHROME

A. Jars

Paste: Reddish brown with flecks of mica which are visible on the surface where they have expanded during firing breaking off the slip.

Surface: Chalky cream-white slip evenly applied on exterior, not always on interior.

Shape: Globular jar with annular base.

Decoration: Exterior — Multiple thin horizontal bands of black, blue-gray, orange and red.

Lothrop, 1926 (Vol. I).Bransford, 1881.

Frequency: MAI: 1. San Francisco Site: sherds 34.

Measurement: diameter at rim: 9.9 cm., height:
17.0 cm., depth: 14.8 cm.

B. Bowls

Paste: Same. Surface: Same.

Shape (Reconstructed): Plain bowls with or without tripod legs.

Decoration: Exterior — multiple lines, geometric patterns and isolated figures. Example of large figures of plumed monkey, two headed dragon, plumed serpent type C.² Interior — plain or with simple red bands.

Frequency: MAI: 1. San Francisco Site: sherds 6.

Measurements (Reconstructed): diameter at rim:
20.8 cm., height: 11.0 cm., depth: 9.3 cm.

C. Plates

Paste: Same. Surface: Same.

Shape (Reconstructed): Flat plate without flaring rim.

Decoration: Exterior — Red bands at rim. Interior — Flower alternating with a plain oblong.

Frequency: San Francisco Site: sherds 2.

Measurements (Reconstructed): diameter at rim: 25.0 cm., height: 4.0 cm., depth: 3.2 cm.

Observations: Although I have typed this ware according to Norweb's typology, this pottery was not of

2 Ibid.

¹ Lothrop, 1926 (Vol. I) (pl. LXII).

a soft paste as described by Norweb. This is probably a local variant. There can be little doubt that at the San Francisco site this ware is from the Late Polychrome Period. The most striking examples were found at a depth of eight inches. This ware, which was only found to a depth of 24 inches, is most notable for its Mexican motifs One San Francisco site sherd from a tripod bowl was decorated with what would appear to be a copy of the two-headed dragon found on Altar WI at Copán. On the side of this altar is the date 9.17.5.0.0. which corresponds to 515 A.D. A similar motif has also been noted on pottery from the Nicova Peninsula.2 The flower motif as described on the plates from the San Francisco site appears to be much more local in character. Various flower patterns are commonly associated with Santa Helena Ware 3

III. UNDER-SLIP INCISED WARE

A. Bowls

Paste: Fine reddish-brown with flecks of mica fired at a high temperature with a dark core.

Surface: Covered with a white slip and incised.

Shape: Globular bowl; one with a slight rim, one without.

Decoration: Exterior — Body of vessel contains incised design of plumed serpent motif alternating with oblongs, either plain or with vertical incised lines. In

3 Thid.

¹ Norweb, 1964. ² Lothrop, 1926 (Vol. I).

one example, all color lost except black, which was used as a filler and as bands encircling the rim. The other example has as the sole painted decoration black and red horizontal bands at rim and base. The San Francisco site sherds have alternating oblongs and a profile human head which contains a full eye and is surrounded by loops. These could either be plumes or speech scrolls. Interior — red band at rim, or plain.

Frequency: MAI: 2. San Francisco Site: sherds 2.

Measurements: diameter at rim: 18.4 cm., height: 13.9 cm., depth: 12.6 cm., diameter at rim: 7.7 cm., height: 5.7 cm., depth: 5.2 cm.

B. Tripod Bowls
Paste: Same.
Surtace: Same.

Shape: Tripod bowls with or without flaring rims.

Decoration: Exterior — Plumed serpent motif; the same as seen by the author on bowls from Las Playitas. Interior — Red bands, and in one example, stepscroll.

Frequency: San Francisco Site: sherds 2.

Measurements (Reconstructed): Diameter at rim: 17.0 cm., Depth: 5.7 cm.

C. Plates

Paste: Same. Surface: Same.

Shape: Flat plate with or without out-flaring sides.

Decoration: Interior — Flower motif, as described under Vallejo Polychrome; incising being used to outline oblong areas, flower and border of interlocking

step scroll. Another fragment has a large figure with plumes in the center. Exterior — Red bands.

Frequency: San Francisco Site: sherds 5.

Measurements (Reconstructed): diameter at rim 23.8 cm., height: 4.8 cm., depth: 4.4 cm.

Observations: This term is the same as that used by Lothrop. The plate, with flower motif, however, could most probably be considered "Managua ware" according to Lothrop, who notes flower-like patterns with incising from Ometepe Island.2 (Fig. 5. B.) This ware is similar to that described by Norweb as "Mombacho Polychrome — Incised." I have used Lothrop's term because Norweb places this ware during the Middle Polychrome period. This is not the case at the San Francisco site. These sherds were found in association with Vallejo Polychrome of the Late Polychrome period, being found from 6 inches to a depth of 22 inches at the San Francisco site. This ware is the incised equivalent of Vallejo Polychrome. Apart from the flower motif plate, the distinctive blue-gray is found on all examples in conjunction with red-orange, red and black The Mexican Gods are also common motifs

IV. BLACK-AND RED BAND POLYCHROME

A. Bowls

Paste: Brown to reddish brown. Well fired, seldom revealing a dark core.

¹ Lothrop, 1926 (Vol. I).

² Ibid.

³ Norweb, 1964.

Surface: Slipped with yellowish white on interior and exterior. Base usually not slipped and if slipped quite watery.

Shape: Plain curved bowls with rounded base. Five examples with ring base. Two vessels have molded handles.

Decoration: Simple red and black horizontal and vertical bands on interior and exterior. In some cases simple geometric design usually the step scroll or the interlocking "L" (13 examples). Three vessels contain either a jaguar head, serpent's eye or monkey inside the interior at the base. Two vessels are decorated on the exterior by a band of silhouette jaguar heads.

Frequency: MAI: 45. San Francisco Site: sherds 37. Measurements (average): diameter at rim: 19.5 cm., height: 5.2 cm., depth: 4.3 cm.

Observations: These bowls could be placed according to Norweb's typology, based on decoration, as either Granada Polychrome or Papagayo of the Middle Polychrome Period or Madeira Polychrome of the Late Polychrome Period.¹ Norweb makes no distinction between Granada and Madeira Polychrome other than the level at which they have been found. These terms, therefore, become meaningless when dealing with an existing collection. This type, as presented here, represents a group of bowls of virtually the same shape and color. The typology of this ware is made even more complicated by the excavation of the San Francisco site. Sherds with a buff slip and black and red bands being found just below the surface to a depth of 66

¹ Norweb, 1964.

inches. This depth at the San Francisco site includes not only the Late and Middle Polychrome Periods but also the Zoned Bichrome Period. Further research is clearly needed before this large general category can be clearly subdivided.

V. PAPAGAYO POLYCHROME

TYPE A

A. Tripod Bowls

Paste: Brown to reddish brown. Well fired, seldom revealing a dark core.

Surface: Slipped with yellowish white on interior and exterior. Slip at base quite watery and at times plain.

Shape: Tripod bowls with mammiform legs.

Decoration: Interior — Red horizontal bands on the interior and rim. All but one example have exterior decoration as well as red band. Exterior — Decoration in black, red and sepia (orange), utilizes horizontal and vertical bands and black outlining. One example of 2-headed dragon motif.¹

Frequency: MAI: 6. San Francisco Site: sherds 4, mammiform legs 4.

Measurements (average): diameter at rim: 10.5 cm., height: 7.8 cm., depth of bowl: 4.5 cm.

Measurements (legs — average): length: 2.8 cm., circ. at max. point: 8.0 cm.

TYPE B

A. Tripod Bowls

Paste: Same.

Surface: Same.

¹ Lothrop, 1926 (Vol. I) (pl. LVII, d).

Shape: Tripod bowls with out-flaring rims and mammiform or effigy legs.

Decoration: Exterior — simple horizontal red bands. Interior — Horizontal and vertical bands of red, black and, in one example, blue-gray. Orange used as a filler in two examples. One example of a jaguar silhouette forming a band. Three vessels decorated with life form in center, probably serpent's eye.

Frequency: MAI: 6.

Measurements (average): diameter at rim: 14.3 cm., height: 7.8 cm., depth of bowl: 3.2 cm.

Frequency: San Francisco Site: legs 3.

Measurements (average): length: 3.8 cm., circum. at max. point: 11.7 cm.

Observations: This ware is diagnostic of the Middle Polychrome Period and is found in the Pacific Area of both Nicaragua¹ and Costa Rica.² I have divided these tripod bowls into two types because of:

- (1) shape Type A deeper and rounder,
- (2) legs Type A exclusively mammiform.
- (3) color Type A orange on all vessels.

The form of a bowl with feet in the shape of animal heads is notable for its similarity to the Mayan post — Classic style. At San Francisco site, this ware was found at a depth of 36 inches.

VI. SACASA STRIATED

A. Boat-shape bowls

Paste: Brown to red; comparatively well fired, sometimes showing a black core.

¹ Norweb, 1964. ² Coe, 1963. Baudez, 1963.

Surface: Body roughly scraped with smooth outflaring rim.

Shape: Boot with out-flaring rim: three with loop handles.

Decoration: On exterior only. Molded decoration (13 examples) frequently indicating a face although at times in an abstract manner. Five examples with redslipped rims; one example with exterior red bands.

Frequency: MAI: 16.

Measurements (average): diameter at rim: 10.2 cm.. height: 16.3 cm., length: 33.2 cm.

I miniature with painted red bands: diameter at rim: 5.3 cm., height: 5.4 cm., length: 15.5 cm.

B. Bowls

Paste: Same. Surface: Same.

Shape: Round bottom bowls (1 example) with ring base. "Canoe" shape with rounded or out-flaring rim.

Decoration: Molded anthropomorphic or zoömorphic figures.

Frequency: MAI: 4. San Francisco Site: sherds 16. Measurement (average): diameter at rim: 11.4 cm.,

height: 8.8 cm.

Observations: The term Sacasa Striated is that used by Norweb¹ and is the same ware as "Zapatero Ware" as described by Lothrop.2 This ware appears to be widely distributed throughout Nicaragua. It is usually found associated with Papagayo Polychrome of the

¹ Norweb, 1964. ² Lothrop, 1926 (Vol. II).

Middle Polychrome Period. Its manufacture continued, however, through the Late Polychrome Period. At the San Francisco site, this ware was found from ten inches to a depth of twenty-seven inches and in association with large concentrations of Papagayo Polychrome and Black-and-Red Band Polychrome.

VII. RED WARE

TYPE A

A. No complete Vessels

Paste: Reddish brown — very coarse and granular. Surface: Covered with a red slip, sometimes polished.

Shape: ?

Decoration: None.

Frequency: San Francisco Site: sherds 1,598. Measurements (Average): Thickness: 1.3 cm.

TYPE B A. Jars

Paste: Reddish brown to brown.

Surface: Covered with a red slip and highly polished on exterior only.

Shape: Globular jars usually with a neck and with either a rounded or out-flaring rim. One example with a loop handle attached at neck and body.

Decoration: One jar fluted.

Frequency: MAI: 5.

Measurements (average): diameter at rim: 4.5 cm., height: 11.5 cm., circumference at max. point: 38.4 cm.

¹ Norweb, 1964.

B. Effigy jars and miniatures

Paste: Same.

Surface: Covered with a red slip on exterior and interior. Exterior highly polished.

Shape: Effigy: One bird and one gourd (?). Miniatures: Globular jars, double globular jars, bowl with ring base, boot and double boot. Both double boot and double jar joined by a stirrup handle.

Decoration: Exterior — Molded decoration of face on both boots of double boot vessel and on single globular jar. Also molded face and arms on bird effigy.

Frequency: MAI: Effigy 2 — Miniatures 5, San Francisco Site: sherd 1.

Measurements: Effigy (average): diameter at rim: 2.5 cm., height: 8.4 cm., length: 11.5 cm., Miniatures (average) height: 4.6 cm.

C. Plates

Paste: Same.

Surface: Covered with a red slip and highly polished on both exterior and interior.

Shape: Flat bottomed plate with or without outflaring sides.

Decoration: Exterior — heavily incised geometric designs. According to Lothrop of the "basketry type".

Frequency: San Francisco Site: sherds 2, San Francisco Site (total) sherds 123

I hollow leg (length: 5.2 cm.),

4 sieve,

2 with heavy punctate on interior.

¹ Lothrop, 1926 (Vol. II). (Plate CXIII B).

Observations: I have divided this ware into two categories based on:

- (1) Thickness Type A thicker and coarser,
- (2) Decoration Type A none (Type B. engraving, incising, hatching, molding),
- (3) Shape Type A? (Type B, smaller plates, bowls, jars).

These differences may in part pertain to function but may also be related to age. Type A, which was a thick coarse ware, was found at the San Francisco site from the surface to a depth of 20 inches. This was in accordance with Vallejo Polychrome of the Late Polychrome period.

Type B, although it overlaps with Type A, was predominately found from eighteen inches to a depth of 70 inches. Type B, therefore, encompasses a large time span but cannot, until further research is undertaken, be used to categorize any time period. Not only is extensive research needed to form types dependent on shape, but also on decoration. As seen in Plate XIII the fragment on the far left appears considerably earlier in character than the other two fragments. These three fragments are from the San Francisco site.

In conclusion Type A may tentatively be considered as representative of the Late and Middle Polychrome periods, probably serving as cooking or storage vessels. Type B, however, cannot be used diagnostically until further research is undertaken.

VIII. BROWN WARE

A. Jars

Paste: Dark brown to reddish brown. Surface: Smooth but not polished.

Shape: Globular jars with small neck; one covered with side opening. One double bowl joined by stirrup

handle. One double handled jar (miniature).

Decoration: Exterior — Plain or with molded arms across bowl at largest diameter and with face on globular neck. One bowl has a complete figure at widest point and another a snake form with double grotesque human-type heads. Handles of double-handled jar surmounted by jaguar head. On both sides of jaguar, on body of vessel, wide shallow incising of indistinguishable pattern.

Frequency: MAI: 7.

Measurements (Average): diameter at rim: 4.6 cm., height: 11.6 cm., circumference at maximum point: 43.7 cm. Miniature: diameter at rim: 2.7 cm., height: 7.2 cm.

Frequency: San Francisco Site: sherds 6.

Measurements: Large fragment with vertical "dragand-jab" punctate decoration at neck: diameter at rim: 7.4 cm. Monkey effigy leg: length: 3.5 cm. (polished).

Observations: This ware is commonly found throughout Nicaragua and Costa Rica. Lothrop refers to this ware as Orange Brown ware because of the variance in color dependent upon the locality. The vessels in the Heye Foundation collection appear to be quite late as

¹ Lothrop, 1926.

indicated by their shape and decoration. Only six fragments of Brown Ware were found at the San Francisco site and, apart from the monkey leg or lug, these are much earlier in character than those of the Heye Foundation. The sole decoration was either a fine or heavy "drag-and-jab" type punctate. At the San Francisco site this ware was found in association with Black-and-Red Band Polychrome. Until further research is conducted, however, this ware cannot be considered diagnostically.

IX. Coco Ware

Paste: Brown and coarse.

Surface: Slipped red and polished.

Shape: Globular jar — rim?

Decoration: Exterior — Reed punctate at rim.

Interior — unslipped with no decoration.

Frequency: San Francisco Site: sherds 3.

Measurements (reconstructed): diameter at max. point: 13.4 cm., height: ?, thickness: 1.2 cm. to 3.6 cm.

Observations: This ware, excavated at the San Francisco site, has never before been recorded as coming from Nicaragua. At present little can be said in regard to this material. In discussing this ware with Dr. Coe, he informed me that although he had found a similar ware in Costa Rica, this ware, as opposed to Coco Ware, was neither slipped nor with punctate decoration and was from the Late Polychrome Period. An unusually thick ware is also noted by Lothrop as

¹ I am deeply indebted to Michael Coe of Yale University for his time and examination of this material.

coming from the Diquis Delta, but this is also devoid of decoration. 1 Coco Ware appears, however, to be from an earlier period than the two Costa Rican finds. An earlier period would be more in keeping with the reed punctate decoration which was found on fragments from the Zoned Bichrome Period in the Nicoya Peninsula.2 This ware, which was found at a depth of 23 inches, appears to have been used as a cooking vessel as at the base it is charred. At present, however, it cannot be placed chronologically.

X. Toya Zoned Incised

Paste: Brown and very granular. Surface: Slipped red and polished.

Shape: Globular Jar without neck and rim simply rounded

Decoration: Exterior — Red slip with vertical bands of yellow enhanced by incised lines. Horizontal incised lines encircling rim. Interior - unslipped with no decoration.

Frequency: San Francisco Site 1: sherds 3.

Measurements: diameter at rim: 18.5 cm., height: 39.0 cm., circ. at max. point: 134.0 cm.

Observations: Although only two sherds conform to Toya Zoned incised as described by Coe from the Chombo Phase in Northwestern Costa Rica, this ware is definitely of this general type and from the Zoned Bichrome Period.³ The globular jar is of the same ware

Lothrop, 1963.
 Coe and Baudez, 1961.
 Coe and Baudez, 1961.

as Palmar Ware as described by Bransford¹ and Lothrop.² Just as Toya Zoned Incised is a contemporary subdivision of Palmar Ware, so is the ware presented here. The color variance within Palmar ware, which includes red and yellow, would therefore support the classification of the globular jar under Toya Zoned Incised. As previously mentioned, two sherds conform to the red-and-black of Toya Zoned Incised and one sherd is the red-and-yellow of the globular jar.

Not only is the decoration of this vessel seen in Palmar Ware but also the shape. (Smithsonian Inst. No. 28, 918).

A few fragments of Toya Zoned Incised were recorded by Norweb from the Puerto San Jorge site, but not particularly associated with either the Aviles or San Jorge phase.³

The large globular jar excavated at the San Francisco site was found intact at a depth of 25 inches. It was covered with a capping bowl. It was charred and contained the following:

2½-3 inch fish, 2 inch rodent, 2 flit chips, feces.

XI. SAN FRANCISCO BLACK-ON-RED

Paste: Brown, granular and poorly fired.

Surface: Polished on exterior and interior, the latter being red slipped with black bands.

¹ Bransford, 1881. ² Lothrop, 1926. ³ Norweb, 1964.

Shape: Bowl with out-carving rim.

Decoration: Exterior — Red rim and black and red bands below rim ending in hatching. Two heavy incised lines just below rim and sporadic incised lines on rim. Interior — red undulating horizontal and vertical bands.

Frequency: San Francisco Site 1: sherd 1.

Measurements: diameter at rim: 37.5 cm., thickness: 1.3 cm.

Observations: This ware appears to be a local variant of Obando Black-on-Red from the Monte Fresco Phase in Costa Rica from the Zoned Bichrome Period. The single sherd which I have included in this ware more strictly adheres to this category being red slipped and polished on both exterior and interior with parallel black bands. The bowl, however, more closely adheres to Puerto Black-on-Red from the San Jorge Phase in Nicaragua.² This is also Zoned Bichrome. This bowl, however, contrary to Puerto Black-on-Red, is only slipped on the interior, the exterior being natural, apart from two painted bands just below the rim. The shape is also different as it is not a tripod bowl. Until more excavations are undertaken, this ware cannot be clearly subdivided. This bowl was the capping bowl for the Toya Zoned Incised globular jar from the San Francisco site. It was found at a depth of 25 inches, and badly damaged by a root. Like the globular jar it was heavily charred at the base.

¹ Coe and Baudez, 1961.

² Norweb, 1964.

SAN FRANCISCO SITE

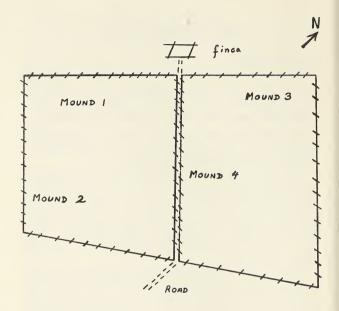
General Features

The area is part of the general flatland along the west bank of the Tipetapa River and Lake Tisma. It is this river and lake that join Lake Managua with Lake Nicaragua. The site is located at 86° latitude and 13.33° longitude near one of the many rivers that drain the area into Lake Tisma. The nearest town is that of Tisma in the department of Masaya.

Evidently the land was once wooded, but when it was bought fifty years ago, by Haydee Arcía de Marín from Feladefo Núñez, it had already been cleared. As a result there are few indigenous trees. The site itself has been plowed continually for the past fifty years while owned by Sra. Marín and was plowed at the time of her purchase.

At present the site is planted in maize and cotton. The plowing depth is generally four to five inches and has been plowed by a tractor. Evidently mechanized farming has been used for at least the past ten years. Below the four to five inch level the soil is extremely hard owing to the climate; approximately five months of rain and seven dry months of sun. The soil cannot be turned with a shovel alone but must be initially broken with a pick.

The site proper occupies approximately four and a half acres and contains four distinct mounds in two corn fields and a high ridge can be seen in the adjacent cotton field. (See Diagram I). Close examination and



Approx Scale:

DIAGRAM 1 SAN FRANCISCO SITE

excavation of Mound 2 and the nearby ridge was impossible at this time because they were either in or extended well into the cotton field, the cotton not having been picked and being the area's cash crop.

Mound 3 on the edge of the corn field appeared small and was not as clearly defined. This Mound and Mound 4 appeared to have originally extended into the small dirt road leading to the *finca*. Mound I, the excavated site, was one of the largest mounds which was both clearly defined and accessible.

It should be noted that when the road to the finca left the main road (although it was still a small dirt road) there was a large stone upon the right. This is of interest because of the lack of natural stone in the area. This stone was approximately two and a half meters in circumference and contained no obvious signs of working. It was, however, completely exposed to the weather.

San Francisco Mound I

The mound is situated in a corn field and the only other sizable form of vegetation on the mound is a guanacaste tree which is approximately two and a half meters in circumference measured ten inches above the ground. This tree is located on the northeast edge of the mound.

Mound I lies along an east-west axis of 214 feet, with a gradual slope towards the west. From north to south the mound measures 176 feet but there is no clearly defined terminal point. This may in part be the result of plowing. The high point, which is four feet above the

lowest point, is 90 feet from the east terminal point. The sharpest angle, which appears between the highest and lowest point, is along the east-west axis. (See Diagram II).

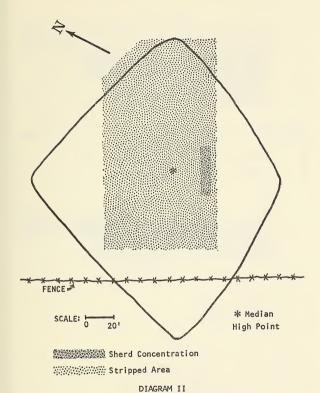
Preliminary surface examination revealed a remarkably heavy sherd concentration. Vallejo Polychrome, Black-and-Red Band Polychrome and thick polished Red Ware were found in great quantity. The heaviest concentration of potsherds was found slightly south of the highest point. It was therefore decided that excavations begin in this area and a test trench was made from east to west. (See Diagram III).

Upon examining the trench, which contained no natural stratification and in which the pottery types appeared representative of the Middle and Late Polychrome Periods, it was decided that it be abandoned. (See Table I). The trench at this point was within ten feet of the center of the mound.

Subsequent Excavation, San Francisco Mound 1

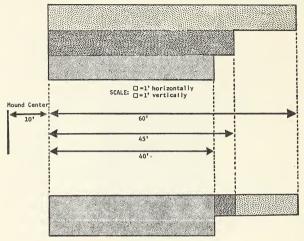
A rough rectangle was laid out with mound center (highest point) as median. Quadrangles were prepared with one laborer to work in each. A six-foot balk was left to divide the quadrants. All quadrants were worked to Level I, which was to a depth of I2 inches, toward center along the balk line. For Level 2 (I2-24 inches) each laborer abandoned the first portion of Level I so that Level 2 was, in each case, carried closer to the center point. (See Diagram IV).

As Quadrant $\scriptstyle \rm I$ had proved least productive, no further excavation was undertaken. Work in Quadrant



San Francisco Site Mound 1
SCHEMATIC VIEW

CROSS SECTION

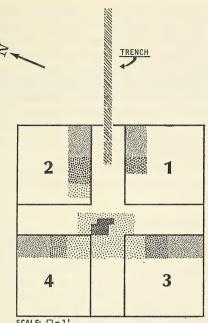


PLAN SCALE = 1' horizontally

- LEVEL 1: depth 6"
- LEVEL 2: depth 12"
- LEVEL 3: depth 18"

DIAGRAM III

San Francisco Site Mound 1
PRELIMINARY TRENCH: CROSS SECTION AND PLAN



SCALE: □ = 1'

DEPTH SCALE

- 70" 24"

DIAGRAM IV

San Francisco Site Mound 1 QUADRANTS AND TEST PIT

2 was continued in order to provide a control area. Quadrant 2 was continued to Level 3 (37 inches).

An extension of Quadrants 3 and 4 was made into the balk which stretched between them and eastward toward the high median center point. The east-west balk separating these quadrants was removed to the pre-existing Level 2 (24 inches). The central area was then enlarged and excavated to Level 3 (37 inches).

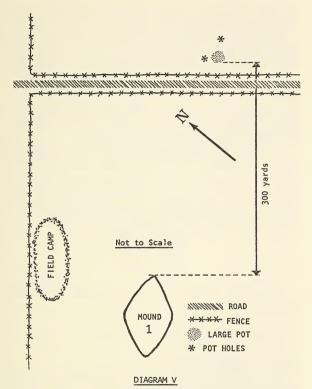
Beginning at this level, a center test pit was continued to a depth of 70 inches, sterile soil having been reached at 68 inches.

All four quadrants and the center test pit produced wares from the Late and Middle Polychrome Period.

San Francisco Site Mound 4

The mound was opened by the owner of the finca, Sr. Marín, and his family. Mound I was already under excavation at the time. Various finds had been reported from this side of the road and, as at Mound I, there were many surface potsherds. These consisted of thick polished Red Ware — Type A, Vallejo Polychrome, Black-and-Red Band Polychrome and the sole example of Luna Ware.

A few months prior to this time a large pot had been discovered and broken while the foreman was digging holes for the fence posts. (See Diagram V). Because of this, the family made three pot-holes near the fence line. These pot-holes ranged from approximately two to four feet in depth and contained the same quantity and categories of potsherds as seen at Mound 1. In one



San Francisco Site LOCATION OF EXCAVATED POT (Mound 4) to Mound I

pot-hole, however, a large pot was discovered and it was at this point that the project became involved.

Mound 4 is located in a corn field and probably originally extended beyond the fence into the middle of the road. It is this small dirt road and fence that separate Mound 4 from Mound 1. The pot was found approximately 300 yards east and slightly south of Mound 1. At a depth of 25 inches a bowl was first seen. This badly damaged bowl turned out to be the capping bowl to a larger globular vessel beneath.

At this point an examination was made of the cut and, as at Mound I, the Early Polychrome Period was lacking. The capping bowl, which was partly damaged by a root and had begun to revert to clay, was excavated. The large globular vessel was then removed intact and was found to contain the following:

2½-3 inch fish 2 inch rodent 2 flint chips feces

These two vessels are from the Zoned Bichrome Period.

REGIONAL SEQUENCE - SAN FRANCISCO PHASE

Zoned Bichrome Period

The major decorated ceramic types were Toya Zoned Incised and San Francisco Black-on-Red. Toya Zoned Incised was also found in the Chombo and Catalena phases of Northwestern Costa Rica¹ and at the Puerto

¹ Coe and Baudez, 1961.

San Jorge site in Nicaragua.¹ A few sherds of fine Red Ware — Type B and Black-and-Red Band Polychrome were also found. Black-and-Red Band Polychrome has only been found during this period at Puerto Nuevo. (Veraguas-Chiriquí frontier; C14 date of 230 B.C.)²

Middle Polychrome Period

Defined by Papagayo Polychrome and Sacasa Striated. Black-and-Red Band Polychrome, as characterized by Norweb's Granada Polychrome found extensively. Fine perforated Red Ware appears.

Late Polychrome Period

Characterized by the introduction of Vallejo Polychrome, Under Slip Incised Ware and thick Red Ware — Type A were also introduced. Black-and-Red Band Polychrome continued.

¹ Norweb, 1964. ² Baudez, 1963.	Trench Level			
³ Norweb, 1964.	1	[] 6-12''	 12-18''	TOTAL
Under alia Indicad			12-18	
Under slip Incised	0	3	1	4
Vallejo Polychrome	6	20	16	42
Black & Red Band	9	8	13	30
Brown Ware	18	13	13	44
Red Ware	98	86	101	285
Sacasa Striated	8	10	10	~ 28

Table I: San Francisco Site

CONCLUSIONS

The Heye Foundation collection with the new acquisitions from the San Francisco site represents all four Nicaraguan ceramic periods. The use of previously collected pieces is not only useful when describing or illustrating a ceramic type but can also quite dramatically point out the great need for further research and a clear typography. This is particularly seen in regard to the Black-and-Red Band Polychrome. In this instance, shape (which cannot be clearly defined from small sherds) appears to be extremely important for classification.

Because of the lack of archaelogical data, working with the existing collection is somewhat of a mixed blessing. The pieces from the Museum are, therefore, used solely within the time sequence as established at the San Francisco site. At the San Francisco site the ordinary wares continued over a large time span. Insufficient material was gathered, however, to use these wares diagnostically, apart from the division of Red Ware into Type A and Type B. It is for this reason that, although the Museum collection of these wares is somewhat different in both shape and moulded decoration, they have been included.

The problem is, then, in what way does the San Francisco site (the material from this site as supported by the Heye Foundation collection) add to our knowledge of the Pacific Area of Nicaragua?

Even to the casual visitor it becomes quickly evident that this area was heavily populated prior to the conquest. Middens, river stone and rubble mounds are frequent, often with clearly defined cultural stratification. Natural stratification, however, is rare. Cultural deposits are usually not found below a depth of eight feet.

Mound I at the San Francisco site appears to be a midden representative of the Late and Middle Polychrome Periods.

In Mound 4, however, three Periods are found: Late Polychrome, Middle Polychrome and Zoned Bichrome. The quantity of sherds found not only in this mound but also in Mound I and the site in general imply a large population during the Late and Middle Polychrome Periods. The number of sherds markedly decreases slightly below the preceding regional phase and above the introduction of Zoned Bichrome.

The Late Polychrome Period, which parallels the Mayan Late Post-classic, was one of renewed Meso-american influence. As previously mentioned the distinct Mayan and Mixteca-Puebla codex motifs on Vallejo Polychrome attest to a dramatic change. Could this change not be the result of new peoples coming to the area from the North? It would seem logical to attribute this Late Polychrome ware to the Nicarao who, according to their own statements, arrived in the area at about the beginning of the 12th century A.D. This migration, therefore, would parallel the collapse of the Toltec state. In view of the notable absence of the black ware so praised by the Spaniards, it seems unlikely that at the San Francisco site these late comers were Chorotegans. Coe suggests that the Chorotegans may

have preceded the Nicarao, arriving in the area around the 8th century A.D. and thereby stimulating the Middle Polychrome Period.1

The Middle Polychrome Period, which would correspond to the Mayan Late Classic through the early Post-classic, is notable for its increased population over the preceding Early Polychrome Period. It is this population increase, clearly noticeable at the San Francisco site, that can possibly be attributed to the Chorotegans. If the Chorotegans were the predominate peoples at this time, could they have been the innovators of Papagayo Polychrome? At this point there is insufficient evidence to answer this and numerous other questions.

Papagayo Polychrome, however, is diagnostic of this period and points to a close relationship with the north. This can be clearly seen in both the form and decoration which has been found from the Isla de Sacrificios to the Pacific Coast of Mexico. Although this ware has been found as a trade item in Mexico and El Salvador, the extensive use of both this form and type of decoration implies a migration as opposed to solely trade contact.

Norweb,3 in contradiction to Coe,4 feels that the Pacific Area first becomes Mesoamerican in character during the Middle Polychrome Period. It appears to Coe,5 on the other hand, that the Early Polychrome

¹ Coe, 1963.

Boggs, 1944, fig. 3d.
 Norweb, 1964.

⁴ Coe, 1962.

⁵ Thid.

Period is one in which the Intermediate Area as a whole was contributing something to Mesoamerica. It is during this period, coeval with the Mayan Early Classic through the beginning of the Late Classic, that alter-ego statues appear. The society at this time is more sedentary and structured than the preceding Zoned Bichrome Period.

Although one can assume that Nicaragua was inhabited by archaic peoples, and in fact two fluted points have been found in Guanacaste Province. Costa Rica, the Zoned Bichrome Period, coeval with the Mayan Late Formative, is, however, the earliest known pottery making culture in Nicaragua. Hunting and fishing appear to be of some importance, although maize farming was the basis for the economy. The pottery in both form and decoration, as well as the maize agriculture, imply a northern influence. Apparent affiliates of Toya Zoned Incised and Rosales Zoned Engraved have been found in Guatemala. Late Formative Utatlán Ware, which closely resembles the black-on-red zoning of the above, has been found at Kaminaljuyú with a date very close to the Monte Fresco phase in Costa Rica.2

The multiple brush technique, which has been found in Costa Rica³ and Nicaragua⁴ is also extensively found in both Guatemala and El Salvador, where it was used to produce the negative decoration known as Usulután.

¹ Swauger and Mayer — Oakes, 1952, Bosh-Gimpera, 1959. ² Coe and Baudez, 1961.

³ Ibid.

⁴ Norweb, 1964.

The problem that is then raised with the north is whether these cultural similarities are the result of trade or migration. Coe suggests the concept of sea trade, but at this point more archaeological evidence is needed before any conclusions can be drawn.

Although diagnostic material from the Late Polychrome Period, Middle Polychrome Period and Zoned Bichrome Period were found, perhaps the greatest problem raised by the San Francisco site is the extensive time span of Black-and-Red Band Polychrome. Some of this ware is clearly from the Late Polychrome and Middle Polychrome Periods. This is seen in the sophistication of much of the decoration as well represented in the Heve Foundation collection. Sources of great concern are the simple bowls having red and black bands as their sole decoration. This ware appears not only in association with their more sophisticated counterparts but also during the Zoned Bichrome Period. What makes this association so striking is the contrast between this ware and the Zoned Bichrome. Again the question of trade with the north is raised as a possible explanation.

At present there are so many unanswered questions that the need for more archaeological research is self evident. Perhaps because of the more dramatic cultures to the north and south, Nicaragua has been ignored for too long.

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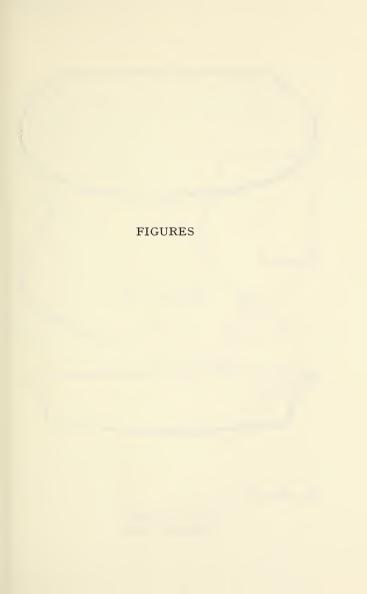
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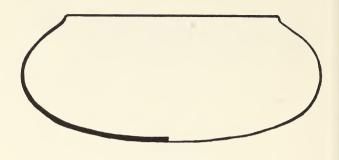
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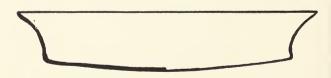
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0 1 2

FIG. 1. LUNA WARE Rim diameter: 22.5 cm.



0 1 2

FIG. 2. LUNA WARE Rim diameter: 28.0 cm.

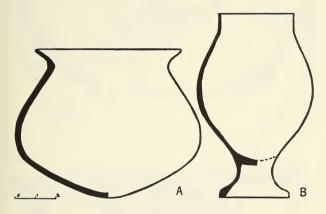


FIG. 3. VALLE JO POLYCHROME A Rim. diameter: 14,7 cm. B. Rim diameter: 9.9 cm.

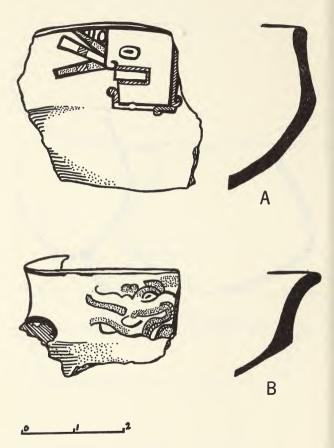


FIG. 4. VALLEJO POLYCHROME A. (24/3224) B. (24/3225), Scale ½



I. 5. VALLEJO POLYCHROME A. (24/3226) B. (24/3227), Scale ½

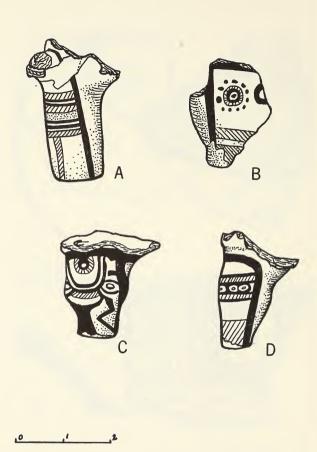


FIG. 6. VALLEJO POLYCHROME Hollow legs A. (24/3228) with rattle. B. (24/3229) D. (24/3230), Scale ½

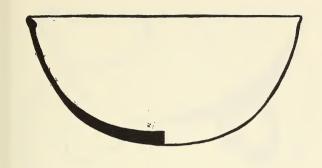




FIG. 7. POLYCHROME WARE — BLACK-AND-RED BAND Rim diameter: 13.8 cm.

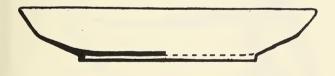




FIG. 8. POLYCHROME WARE — BLACK-AND-RED BAND Rim diameter: 22.3 cm.

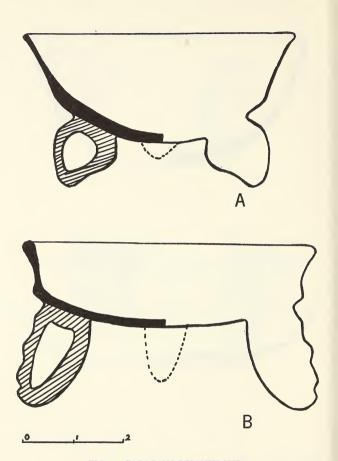


FIG. 9. PAPAGAYO POLYCHROME
A. Type A. Rim diameter: 13.5 cm. B. Type B. Rim diameter: 14.4 cm.

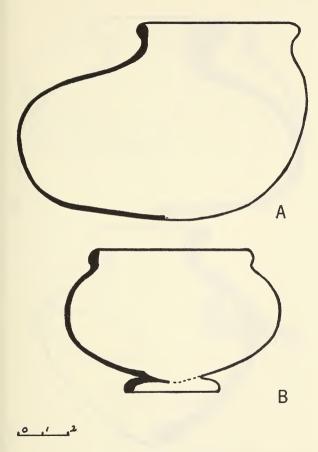


FIG. 10. SACASA STRIATED

A. Rim diameter: 16.0 cm. B. Rim diameter: 15.5 cm. (3/2344)

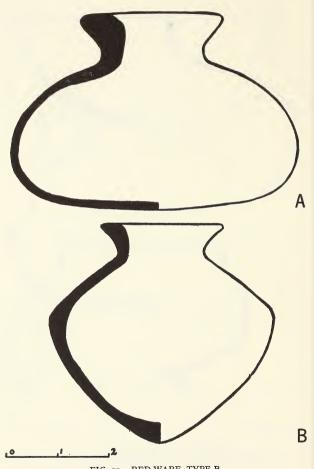
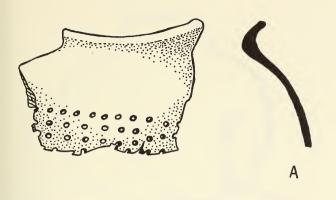


FIG. 11. RED WARE. TYPE B. A. Rim diameter: 7.0 cm. (3/2309) B. Rim diameter: 6.0 cm. (13/6806)



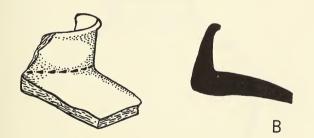


FIG. 12. RED WARE. TYPE B. A. (24/3231) B. (24/3232)

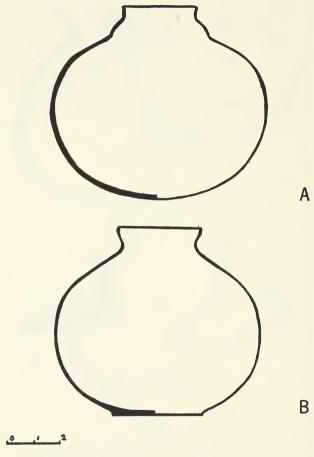


FIG. 13. BROWN WARE
A. Rim diameter: 7.4 cm. B. Rim diameter: 8.3 cm.

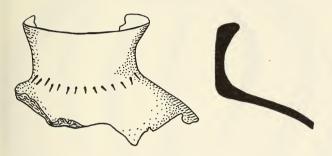


FIG. 14. BROWN WARE Scale ½ (24/3233)

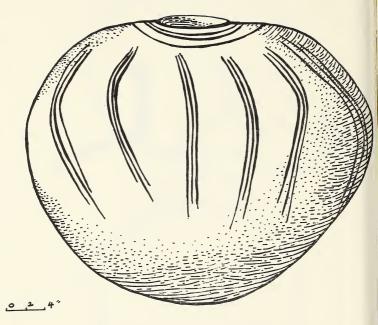
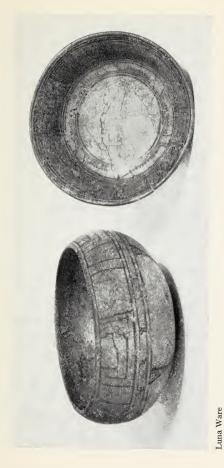


FIG. 15. TOYA ZONED INCISED Rim diameter: 18.5 cm. (24/3253)







Left: (16/7791) Rim diameter: 22.5 cm. Right: (3/2343) Rim diameter: 28.0 cm.





Vallejo Polychrome — San Francisco Phase Upper: left: (24/3234) right: (24/3225) Tower: left: (24/3224) right: (24/3225)



Vallejo Polychrome — San Francisco Phase Bowl (24/3226) Height: 11.3 cm.

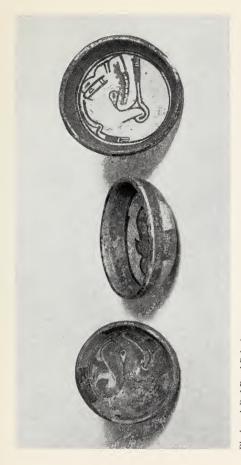


Vallejo Polychrome — San Francisco Phase Upper: left: (24/3235) right: (24/3237) Lower: left: (24/3236) right: (24/3238)



Under — Slip Incised Ware — San Francisco Phase

Upper: left: (24/3239) right: (24/3240) Center: (24/3241) Lower: left: (24/3242) right: (24/3243)



Black and Red Band Polychrome Left: (13/9312) Rin diameter: 11.5 cm. Center: (13/6774) Rin diameter: 14.0 cm. Right: (13/6773) Rin diameter: 14.0 cm.



Black and Red Band Polychrome

Left: (13/6788) Rim diameter: 11.5 cm. Center: (3/2313) Rim diameter: 14.0 cm. Right: (21/3787) Rim diameter: 11.5 cm.



Left: (3/2313) Rim diameter: 14.0 cm. Right: (13/6774) Rim diameter: 14.0 cm.



Papagayo Polychrome Left: (13/6801) Type A Rim diameter: 13.5 cm. Right: (15/9323) Type B Rim diameter: 14.4 cm.



Effgy Legs — San Francisco Site

Left: (24/3244) Papagayo Polychrome length: 8.0 cm.. Center: (24/3245) Brown Ware length: 3.2 cm. Right: 7.5 cm. Papagayo Polychrome (badly charred) length: 7.5 cm.



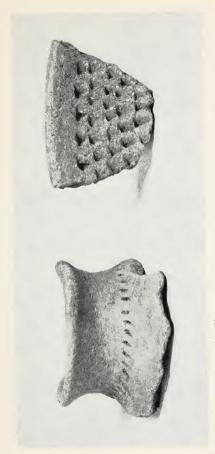
Bowl with ring base (3/2344) Rim diameter: 15.5 cm.



Red Ware — San Francisco Site Left: (24/3246) Center: (24/3247) Right: (24/3248)



Red Ware Left: (3/2309) Rim diameter: 7.0 cm. Center: (15/9353) Height: 10.2 cm. Right: (13/6806) Rim diameter: 6.0 cm.



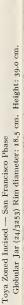
Brown Ware — San Francisco Site Left: (24/3233) Rim diameter: 7.2 cm. Right: (24/3249) Thickness: I.o cm.



Brown Ware Left: (17/8289) Rim diameter: 3.3 cm. Center: (15/9349) Rim diameter: 5.7 cm. Right: (22/4537) Rim diameter: 2.6 cm.



Coco Ware — San Francisco Site Left: (24/3250) Right: (24/3252) Average thickness: 3.2 cm.





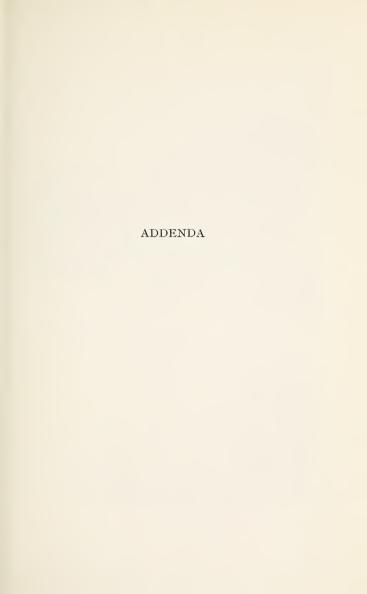


San Francisco Phase
Capping Bowl (24/3254) San Francisco Black-on-Red.

Globular Jar (24/3253) Toya Zoned Incised.

Rim diameter: 18.5 cm.



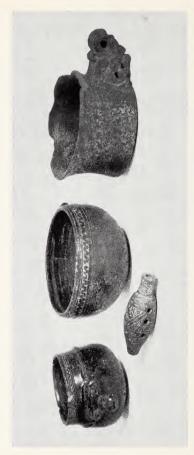








Black and Red Band Polychrome Left: (13/6825) Height: 5 cm. Right: (13/6834) Height: 19.8 cm.



Castillo Engraved

Left: (3/239) Rim diameter: 8.2 cm. Center: (1/3824) Length: 9.4 cm. (3/2310) Rim diameter: 13.6 cm. Right: (1/7829) Rim diameter: 13.6 cm.



Pataky Polychrome
Effigy (15/9338) Rim diameter: 11.2 cm.



Pataky Polychrome
Urn (13/6845) Rim diameter: 11.2 cm.



Potosi Applique Bowl (21/3797) Rim diameter: 19.6 cm.



Potosi Applique Incensario (23/4043) Height: 30 cm.



Urcuyo White-on-Red Bowl (21/3788) Rim diameter: 9.4 cm.





